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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,917	12/10/2003	Monique Van Der Zon	ACH2979	5787

56744 7590 01/25/2006

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EXAMINER

JOHNSON, CHRISTINA ANN

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/731,917	Applicant(s) ZON ET AL.	
	Examiner Christina Johnson	Art Unit 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6, and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Gupta et al.

Gupta et al. (US 5,254,516) discloses a process for making zinc titanate particles that are highly durable and have a size range of 50 to 400 micrometers. The process involves mixing zinc and titanium dioxide in a specially designed granulator and then spraying on a liquid binder (Column 6, lines 52-56). In an illustrative example, zinc oxide, titanium oxide, and a clay are agitated in the granulator and described as "dry-mixed," indicating that the materials are dry when initially agitated (Column 8, line 32). An aqueous binder is added in the same example (Column 8, lines 33-38). Finally the material is calcined at a temperature between 800° and 900° C (Column 8, lines 44-45).

With respect to the limitation "suitable for use in the preparation of FCC catalyst particles," this recitation has been considered by the examiner as a statement of intended use. While intended use recitations cannot entirely be disregarded, in composition and article claims, the intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention over the prior art. *In re Casey*, 370 USPQ 235 and *In re Otto*, 312

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USPQ 458. It is the position of the examiner that the prior art structure is capable of performing the intended use and therefore meets the instant claims.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Gupta et al.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6-7, and 9-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Rainis.

Rainis (US 4,902,666) discloses a process for making spheroidal bodies having a size range of 1000 to 2000 micrometers, which are useful as catalysts by selective agglomeration. A specific example teaches the agglomeration of a zeolite powder and alumina by mixing in a high-speed mixer, followed by the addition of a dilute aqueous acid to cohere the materials initially agitated (Column 11, lines 42-49). The desired agglomerates are separated and subsequently calcined (Column 11, lines 60-64).

With respect to the limitation "suitable for use in the preparation of FCC catalyst particles," this recitation has been considered by the examiner as a statement of intended use. While intended use recitations cannot entirely be disregarded, in composition and article claims, the intended use must result in a structural difference

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between the claimed invention and the prior art in order to patentably distinguish the claimed invention over the prior art. *In re Casey*, 370 USPQ 235 and *In re Otto*, 312 USPQ 458. It is the position of the examiner that the prior art structure is capable of performing the intended use and therefore meets the instant claims.

The difference between the reference and the claims is that the reference does not disclose a particle diameter of less than 1000 microns. However, the reference does disclose a size of 1000 micrometers which is so close to the endpoint claimed that *prima facie* one would expect them to have the same properties. Further, the sizes claimed are so close as to be overlapping, at least at the point 1000. Overlapping ranges are a *prima facie* obviousness.

With respect to the encompassing and overlapping ranges previously discussed, the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time of invention to select the portion of the prior art's range which is within the range of the applicants' claims because it has been held *prima facie* case of obviousness to select a value in a known range by optimization for the results. *In re Boesch*, 205 USPQ 215. Additionally, the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a *prima facie* case of obviousness. *In re Malagari*, 182 USPQ.

Additionally, with respect to claim 7, a further difference between the reference and the claims is that the reference discloses a speed of mixing, 50 s^{-1} , outside of the

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range claimed, $200 - 1000 \text{ s}^{-1}$. However, one of ordinary skill in the art would appreciate that different mixing times would require different speeds of mixing to achieve a threshold degree of mixing. Since the instant claims do not specify a particular mixing time, the speed of mixing necessary to achieve a threshold degree of mixing may vary from the speed disclosed by Rainis. One of ordinary skill in the art would simultaneously appreciate that the speed of mixing used in agitation would influence the degree of mixing, and thus, the speed of mixing would be a result effective variable for the degree of mixing. That the speed of mixing would be a result effective variable for degree of mixing would give one of ordinary skill in the art motivation to optimize the speed of mixing for any particular mixing time. It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the instantly claimed ranges through process optimization, since it has been held that there the general conditions of a claims are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Boesch*, 205 USPQ 215.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al. as applied above for claims 1-4, 6, and 9-10.

The teachings of Gupta et al. are as described above for claims 1-4, 6, and 9-10.

The difference between the reference and the claims is that the reference does not disclose the speed of mixing used to agitate the dry materials. However, one of ordinary skill in the art would appreciate that the speed of mixing used in agitation would influence the degree of mixing, and thus, the speed of mixing would be a result effective

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variable for the degree of mixing. That the speed of mixing would be a result effective variable for degree of mixing would give one of ordinary skill in the art motivation to optimize the speed of mixing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the instantly claimed ranges through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Boesch*, 205 USPQ 215.

Claim Rejections - 35 USC § 102/103

6. Claim 8 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over either Gupta et al. or Rainis.

Gupta et al. (US 5,254,516) discloses a process for making zinc titanate particles that are highly durable and have a size range of 50 to 400 micrometers.

Rainis (US 4,902,666) discloses a process for making spheroidal bodies having a size range of 1000 to 2000 micrometers, which are useful as catalysts by selective agglomeration.

The disclosed products of the prior art and the instantly claimed product appear to be essentially the same, comprised of the same components, and used in the same manner. In the event any differences can be shown for the product of the product-by-process claim 8 as opposed to the product taught by the prior art, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See *In re Thorpe*, 227

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USPQ 964 (Fed. Cir. 1985). Also, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

Response to Arguments

7. Applicant's arguments filed November 21, 2005 have been fully considered but they are not persuasive.

With respect to the rejection over the Gupta et al. reference, applicant argues that Gupta et al. stops the agitation prior to addition of the liquid binding agent. This argument has been considered but is not persuasive. Gupta et al. teaches that the agitation is continued. Refer to column 8, lines 30-42 and column 18, lines 25-40. The liquid binding agent is sprayed on the mixed, dried powders while in the granulator and are then continued to be mixed following the addition of the liquid binding agent.

With respect to the rejection over the Rainis reference, applicant argues that there is no teaching or suggestion to make a spherical body less than 1000 microns, as required by the instant claims. However, as discussed above, the claimed value and the value taught by the prior art are so close, that they can be considered to overlap. Refer also to MPEP 2144.05.

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Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

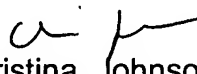
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Johnson whose telephone number is (571) 272-1176. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Christina Johnson
Primary Examiner
Art Unit 1725

1/23/06

CAJ
January 23, 2006